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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,057	05/17/2007	David Wilson	2960-97005	8961
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Gerald T Shekleton Welsh & Katz Floor 22 120 South Riverside Plaza Chicago, IL 60606-3912			EXAMINER HALL, COREY JOHN	
			ART UNIT 3743	PAPER NUMBER
			MAIL DATE 12/30/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/573,057

**Applicant(s)**

WILSON, DAVID

**Examiner**

COREY HALL

**Art Unit**

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS/US)
- Paper No(s)/Mail Date 6/25/2009

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments, see page 9, lines 6-7, filed 9/11/2009, with respect to the objection of the specification have been fully considered and are persuasive. The objection of the specification has been withdrawn.
3. Applicant's arguments, see page 9, lines 8-9, filed 9/11/2009, with respect to the objections of claim 17 have been fully considered and are persuasive. The objection of claim 17 has been withdrawn.
4. Applicant's arguments filed 9/11/2009 have been fully considered but they are not persuasive. On page 9, line 17-page 10, line 16 the Applicant argues that Roberts teaches what is essentially a batch operation which uses a discharge gate 50 to cause the discharge means 22 to operate intermittently so the material descends intermittently. That Applicant's invention has a dryer inlet and outlet that are open and the flow of particulate material through the dryer is substantially continuous. The Applicant further states that although maintaining the inlet and outlet of the dryer open permits substantially continuous flow of particulate material through the dryer, such an arrangement also has the potential to significantly reduce the dryer efficiency due to passage of the air through the open inlet and outlet. Finally, Applicant argues that Roberts does not teach or suggest having the material flow in a substantially continuous manner and is silent about problems associated with maintaining the inlet and outlet open. However, Roberts teaches the claimed limitations and the Examiner agrees that if the dryer inlet and outlet of the

Roberts dryer are maintained open it would permit a substantially continuous flow of particulate material through the dryer. The section Applicant refers to of Roberts at page 2, lines 92-99 merely states that the discharge gate 50 is provided as an adjustable gate over discharge roll 22 to vary the size of the discharge opening 51 between the gate 50 and the top of the roll 22. This adjustable gate does not necessarily shut off the discharge opening, but is merely adjustable to allow for a greater or lesser flow of material through the discharge opening. With regard to the potential of significantly reducing the dryer efficiency due to the passage of air through the open inlet and outlet it appears that Applicant is referring to Applicant's Specification at page 12, lines 13-21 which discusses reducing leakage of air through the top of the particulate bed by having the material mound above the uppermost gaseous openings and biasing the pellet feed towards the air outlet side of the dryer. These techniques for avoiding reductions in dryer efficiency have not been claimed and could be controlled by the Roberts dryer by adjusting the rate of feeding material and the rate at which the material is removed from the dryer. The adjustable gate 50 could be used to control the flow rate through the discharge opening. The Roberts dryer does not appear to have a structural shortcoming that would prevent it from operating in a way substantially the same as Applicant's claimed invention. Therefore, the Applicant's arguments fail to overcome the Roberts reference.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-9, 11-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US Patent No. 1,482,812 cited in prior notice of references cited mailed 2/19/2009) in view of Jott Australia Pty. Ltd. (WO 03/001131 A1 cited in prior notice of references cited mailed 2/19/2009).

8. Regarding claims 1-9, 11-16, and 20, Roberts discloses a dryer for drying particulate material (page 1, lines 9-10), comprising at least one substantially vertical elongate container (figure 1) having: an open upper inlet 16 (figure 1, "openings 16" page 2, line 13) for receiving a charge of moisture containing particulate material ("material to be dried" page 1, line 60); an open lower outlet 51 (figure 1, "discharge opening 51" page 2, line 94) for discharging dried particulate material (page 2, line 71), whereby said particulate material travels under the influence of gravity ("gravitate" page 3, line 91) from said inlet to said outlet (figure 1) . . . ; two substantially vertical and opposed gas permeable walls (page 1, lines 100-101) through which a drying gas (page 2, line 32) can pass to contact said particulate material; said dryer also comprising plenums 4, 6, 7 (figure 1, page 2, lines 3-7) on exterior surfaces of said gas permeable walls, covering ingress and egress openings within said gas permeable walls, wherein the plenums are divided into zones of differing air stream properties (page 3, lines 46-48),

wherein the gas permeable walls comprise vertically spaced, substantially horizontally oriented slats 8, 9 (figure 1, page 1, line 101), wherein ingress openings and egress openings are respectively provided within said permeable walls (page 2, lines 3-5), wherein a plenum 7 (figure 1) covering ingress openings comprises at least one inlet 26 (figure 1) and a plenum 6 (figure 1) covering egress openings comprises at least one outlet 32 (figure 1), wherein the at least one outlet comprises at least one extract duct 30 (figure 1), wherein drying gas (page 2, line 32) is drawn ("drawing" page 2, line 52) into the at least one inlet 26 (figure 1) by a circulator ("exhaust fan" page 2, line 51), wherein the circulator is an induced draft fan ("vacuum" page 2, lines 51-54), wherein the direction of drying gas flow through the charge of particulate material is reversed ("and again" page 2, lines 5-6) from one plenum zone to an adjacent plenum zone (page 2, lines 3-7), comprising lateral supporting members 1, 2, 3 (figure 3) joining opposing gas permeable walls (page 1, lines 80-86), wherein the supporting members are internal membrane walls 2, 3 (figure 3) that divide the dryer into a plurality of adjacent cells (page 1, lines 86-91) and a cell of a dryer (figure 3), and a dryer (page 1, lines 9-10) for drying . . . comprising at least one substantially vertical elongate container (figure 1) having: an open upper inlet 16 (figure 1) for receiving a charge of . . . pellets ("more or less finely divided materials" page 1, lines 9-10 and where pellets of brown coal is taught below); an open lower outlet 51 (figure 1, page 2, line 94) for discharging dried pellets (page 1, lines 9-10 describing drying material and where pellets are taught below) . . . , whereby said pellets travel under the influence of gravity ("gravitate" page 3, line 91) from said inlet to said outlet (figure 1) . . . ; two opposing substantially vertical gas permeable walls (page 1, lines 100-101) through which a drying gas (page 2, line 32) can pass to contact said pellets; said dryer also comprising plenums 4, 6, 7 (figure 1, page 2, lines 3-

7) on external surfaces of the gas permeable walls covering ingress and egress openings within the gas permeable walls, wherein the plenums are divided into zones of differing air stream properties (page 3, lines 46-48) and wherein the direction of drying gas flow through the charge of . . . pellets is reversed (“and again” page 2, lines 5-6) from one plenum zone to an adjacent plenum zone (page 2, lines 3-7); the dryer comprising lateral internal membrane walls 1, 2, 3 (figure 3) joining opposing gas permeable walls (page 1, lines 80-86) that divide the dryer into a plurality of adjacent cells (page 1, lines 86-91), except for in a substantially continuous manner, a charge of brown coal containing pellets, pellets of brown coal, in a substantially continuous manner, brown coal containing pellets, the gas permeable walls comprise a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, wherein said ingress and egress openings are provided within said permeable leg, the dryer having a height to width ratio of at least 3:1, 5:1 or 10:1, and a dryer for drying pellets containing brown coal. However, Jott Australia Pty. Ltd. teaches in a substantially continuous manner (“The solid material may flow (or be moved) continuously” page 3, lines 30-31), a charge of brown coal containing pellets (“drying of pelletised brown coal” page 9, line 9), pellets of brown coal (page 9, line 9), brown coal containing pellets (page 9, line 9), gas permeable walls comprise a substantially continuous corrugated plate (“corrugated” page 7, lines 24-29) positioned in a vertical (“vertical” page 7, line 25) manner and having perforations shaped as holes (“holes” page 7, line 27), wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other (page 7, lines 24-29 describing corrugated vertical walls which would inherently have a leg angled in a first direction followed by a leg angled in a second direction which would continue

alternating for the length of the vertical wall and where figures 4-5 of Roberts show legs angled in a first direction to hold back the material followed by openings in an alternating fashion to allow a cross-flow of air through the material), wherein said ingress and egress openings are provided within said permeable leg (page 7, lines 24-29), and a dryer (figure 1) for drying pellets containing brown coal (page 9, line 9) in order to dry pelletised brown coal (page 9, line 9) with a good crossflow of drying fluid as the pelletised brown coal continuously flows down through the dryer (page 3, lines 28-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Roberts reference, to include in a substantially continuous manner, a charge of brown coal containing pellets, pellets of brown coal, in a substantially continuous manner, brown coal containing pellets, the gas permeable walls comprise a substantially continuous corrugated plate, wherein each corrugation comprises a supporting leg and a permeable leg angled with respect to each other, wherein said ingress and egress openings are provided within said permeable leg, and a dryer for drying pellets containing brown coal, as suggested and taught by Jott Australia Pty. Ltd., for the purpose of drying pelletised brown coal with a good crossflow of drying fluid as the pelletised brown coal continuously flows down through the dryer. The Applicant is combining prior art elements according to known methods to yield predictable results. The Applicant is combining the prior art elements of a vertical dryer that dries material taken from the ground using louvered walls as disclosed by Roberts with the prior art elements of a vertical dryer that continuously dries pelletised brown coal using substantially continuous corrugated plates as taught by Jott Australia Pty. Ltd. according to known methods to yield the predictable results of a vertical dryer that continuously dries pelletised brown coal using substantially continuous corrugated plates. One



would be motivated to combine Roberts with Jott Australia Pty. Ltd. because Jott Australia Pty. Ltd. teaches using a vertical dryer for drying pelletised brown coal with a good crossflow of drying fluid as the pelletised brown coal continuously flows down through the dryer and the vertical dryer of Roberts could be similarly improved to continuously dry brown coal, thus providing increased production at lower production costs by running the dryer without stopping.

It would have been an obvious matter of design choice to make the dryer having a height to width ratio of at least 3:1, 5:1 or 10:1, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US Patent No. 1,482,812) in view of Jott Australia Pty. Ltd. (WO 03/001131 A1) as applied to claim 5 above, and further in view of Johnson (US Patent No. 4,337,584 cited in prior notice of references cited mailed 2/19/2009).

10. In regards to claim 10, Roberts in view of Jott Australia Pty. Ltd. discloses the claimed invention, except for a desiccator or refrigerator being provided in conjunction with the at least one outlet to recover water from drying gas exiting the dryer. However, Johnson teaches a grain dryer (column 2, line 52) that uses an evaporator 38 (figure 1) of a refrigeration system (column 3, lines 16-17) and a condensate collecting tray 42 (figure 1, column 3, lines 18-19) at the exit 78 (figure 1) of the dryer 10 (figure 1) in order to remove excess moisture from the drying air (column 4, lines 16-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Roberts in view of Jott Australia Pty. Ltd. reference, to include a desiccator or refrigerator in conjunction with the at least one outlet to

recover water from drying gas exiting the dryer, as suggested and taught by Johnson, for the purpose of removing excess moisture from the drying air.

11. Claims 17-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US Patent No. 1,482,812) in view of Jott Australia Pty. Ltd. (WO 03/001131 A1) as applied to claim 1 above, and further in view of Wilson (The Coldry Process provided by Applicant in IDS dated 6/25/2009).

12. In regards to claims 17-19 and 21, Roberts in view of Jott Australia Pty. Ltd. discloses the claimed invention including from Roberts a drying plant comprising: (b) at least one conveyer 18 (figure 1, page 2, line 18) for conveying said surface conditioned material to an inlet 16 (figure 1) of a dryer according to claim 1; (c) a collection surface 22 (figure 1, page 2, line 25) for retrieving dried particulate material from the dryer; and (d) a particulate material remover 23 (figure 1, page 2, line 28) for removing dried particulate material from said collection surface, except for (a) a conditioning bed for subjecting moisture containing particulate material to surface conditioning, a compactor for production of brown coal containing compacted bodies, a compactor comprising a mixing/conditioning device and a pelletiser, and a method of drying brown coal which comprises introducing brown coal fines into a drying plant according to claim 17. However, Wilson teaches (a) a conditioning bed ("Pellet Conditioning Chamber and Elevator" Figure 2, page 3, section 4.3, lines 1-6 describing an elevating tray system for conditioning pellets) for subjecting moisture containing particulate material to surface conditioning, a compactor ("Extruder" Figure 2, page 3, section 4.2, lines 1-4 describing using an extruder for pelletising) for production of brown coal ("brown coal" page 1, line 1) containing compacted bodies, a compactor comprising a mixing/conditioning device and a pelletiser (Figure

1 describing brown coal being mixed, conditioned and pelletised, Figure 2 showing a blender, extruder and conditioning elevator, page 3, section 4.2, line 1-section 4.3, line 6 describing mixing, pelletising and conditioning), and a method of drying brown coal which comprises introducing brown coal fines into a drying plant according to claim 17 ("wet brown coal fines" page 3, section 4.1, line 1-section 4.4, line 9) in order to provide higher rank coal at lower pressures, using fewer moving parts, and lower costs (page 5, lines 13-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Roberts in view of Jott Australia Pty. Ltd. reference, to include (a) a conditioning bed for subjecting moisture containing particulate material to surface conditioning, a compactor for production of brown coal containing compacted bodies, a compactor comprising a mixing/conditioning device and a pelletiser, and a method of drying brown coal which comprises introducing brown coal fines into a drying plant according to claim 17, as suggested and taught by Wilson, for the purpose of providing higher rank coal at lower pressures, using fewer moving parts, and lower costs. The Applicant is combining prior art elements according to known methods to yield predictable results. The Applicant is combining the prior art elements of a vertical dryer for drying material taken from the ground as disclosed by Roberts with the prior art elements of a vertical dryer for drying pelletised brown coal that has been conditioned, compacted into pellets, and mixed as taught by Wilson according to known methods to yield the predictable results of a vertical dryer for drying pelletised brown coal that has been conditioned, compacted into pellets, and mixed. One would be motivated to combine Roberts with Wilson because Wilson teaches providing a higher rank coal using a vertical dryer after mixing,

conditioning and pelletising brown coal and the vertical dryer of Roberts could be similarly improved to dry brown coal, thus providing a supply of higher rank coal.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COREY HALL whose telephone number is (571)270-7833. The examiner can normally be reached on Monday - Friday, 9AM to 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Rinehart can be reached on (571)272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Corey Hall/  
Examiner, Art Unit 3743  
/Kenneth B Rinehart/  
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